Monsoon prediction

1114. SHRI GIREESH KUMAR SANGHI: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether it is a fact there is no improvement in the predictions of monsoon in India since early 1930s;

(b) if so, the details thereof;

(c) whether Government have studied the recurring failures in predicting droughts and floods;

(d) if so, the details thereof; and

(e) if not, the reasons therefor?

THE MINISTER OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) and (b) No, Sir. India Meteorological Department (IMD) has been issuing operational long range forecasts based on objective statistical models since late 1920s. From 1924 to 1987, India Meteorological Department (IMD) issued forecasts for two broad homogeneous region (NW India and Peninsula). During this period, on an average, the percentage of correct forecasts ranged between 58% to 63%. Since 1988, IMD has prepared forecasts for southwest monsoon rainfall over the country as a whole. During the period 1988—2005, all the forecasts (for the country as a whole) were generally correct except in drought year of 2002 and 2004, when rainfall received were in the deficient category against forecast of normal rainfall. It may be mentioned, that no operational forecasting group (either in India or abroad) could predict the droughts of 2002 and 2004. IMD's forecasts for 2005 southwest monsoon rainfall was proved correct.

(c) and (d) There are no techniques available at present to predict droughts in advance. They are being dynamically monitored. IMD provides necessary inputs on rainfall distribution of all meteorological subdivisions to the concerned agencies during the monsoon season. This helps in mobilizing resources to combat the evolving drought scenarios.

IMD also provides necessary meteorological inputs to Central Water Commission, which is the nodal agency for flood forecasting. However, forecast of heavy rainfall which may lead to flood situations is done only in short range time scale.

For improving Long rage forecasting of monsoon rainfall, India Meteorological Department has been making critical review of its predictions regularly, especially after the failure in 2002 and 2004. IMD has taken the following major steps to improve its monsoon prediction capability.

- Indian Institute of Science, Bangalore is collaborating with IMD and helping to implement a dynamical prediction system using the mathematical model developed at the Experimental Climate Prediction Centre, scripps Institute of Oceanography, USA. This model has shown reasonable skill in predicting monsoon rainfall over India. Using this model, experimental forecasts were prepared for the 2005 southwest monsoon rainfall. However, more quality tests and research work are required before the model can be put to use for operation of work.
- As statistical models outperform dynamical models at present, IMD has developed many new statistical models with the aim to replace existing operational statistical models. These new statistical models have shown improved skill but have to be tested for a couple of years more before their use in operational mode.

(e) Doesn't arise.

Conversion of four-lane highways into six-lane highways in Rajasthan

1115. DR. GYAN PRAKASH PILANIA: Will the Minister of SHIPPING, ROAD TRANSPORT AND HIGHWAYS be pleased to state:

(a) the criteria being used to determine the four-lane highways that would be selected for six-lane conversion;

(b) whether on the basis of the criteria, NHAI intends to make some four-lane highways into six-lane highways in Rajasthan;

(c) if so, the details thereof and the time-frame therefor;

(d) whether there are any proposals from the Government of Rajasthan, pending under consideration with the Central Government at present; and

(e) if so, the details thereof and by when they are likely to be cleared?